

Des Moines Area Community College

Associate of Applied Science (A.A.S.) – Robotics & Control System Eng. Technology

Transfer guide to the [University of Northern Iowa](#)

Bachelor of Science (B.S.) – Electrical Engineering Technology

1. When will I graduate?

Students transferring to UNI from this A.A.S. program at DMACC should **expect to take 69 credits at UNI**. Assuming that the student is starting at UNI during the fall semester, it will take roughly four semesters (two and a half years, a fall/spring/fall/spring sequence), with two summer courses, to graduate.

Transfer Credit Summary	Credits
A.A.S. credits transferring directly into UNI program	48
Other credits transferring to UNI	3
Total credits transferring towards UNI degree	51
Total credits needed at UNI	69 (120 total)

2. What A.A.S. courses transfer?

Upon completion of this A.A.S. degree, the following courses within the listed program at UNI will be completed:

- MATH 1140 – Precalculus (4 cred.)
 - Students must complete MAT 129 – Precalculus at DMACC.
- PHYSICS 1511 – General Physics I (4 cred.)
 - Students must complete PHY 710 – Technical Physics at DMACC.
- TECH 1037 – Introduction to Circuits (3 cred.)
- TECH 1039 – Circuits & Systems (3 cred.)
- TECH 2053 – Digital Electronics & Lab (4 cred.)
- TECH 2055 – Electrical Power & Machinery & Lab (4 cred.)
 - Students must complete ELT 728 – Motor Controls & Power Electronics & ELT 816 – Systems Troubleshooting & ELT 817 – Systems Troubleshooting Lab at DMACC.
- TECH 3157 – Microcontroller Applications (3 cred.)
- TECH 3164 – Programmable Logic Controller (3 cred.)
- TECH 4103 – Electronic Communications (3 cred.)
- Additional university electives transferring (17 cred.)

3. What other courses transfer?

Other courses built into this A.A.S. curriculum, or open electives, will also transfer to UNI. The following courses are recommended to take at DMACC as part of this A.A.S. curriculum:

- A.A.S Degree core Social & Behavioral Sciences/Humanities elective (3 cred.)
 - Students should complete ART 101 – Art Appreciation **or** MUS 101 – Music Appreciation at DMACC.



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4. What would I study at UNI?

By completing the recommended A.A.S. degree plan, the student would be required to complete the courses in black, listed below, at UNI.

Math/Science Coursework		Cr.
CS 1160	C/C+ Programming	3
MATH 1140	Precalculus	4
MATH 1150 or MATH 1420	Calculus for Technology or Calculus I	4
PHYSICS 1511	General Physics I	4
STAT 1772	Intro to Statistical Methods	3
Total Credits Remaining		10

Technical Core		Cr.
ENGR 1000	Intro. to Eng. & Prof. Practices	3
PHIL 1560	Science, Technology & Ethics	3
TECH 1037	Intro to Circuits	3
TECH 1039	Circuits & Systems	3
TECH 2051	Analog Electronics & Lab	4
TECH 2053	Digital Electronics & Lab	4
TECH 2055	Electrical Power & Machinery & Lab	4
TECH 3129	Linear Control Systems	3
TECH 3157	Microcontroller Applications	3
TECH 3160	Comp.-Aided Instru. & Interfacing	3
TECH 3164	Prog. Logic Controllers	3
TECH 4103	Electronic Communications	3
TECH 4104	App. Digital Signal Processing	3
TECH 4165	Wireless Comm. Networks	3
TECH 4167	Power Electronics Applications	3
ENGR 4500	Senior Design	3
ENGLISH 3772	Tech. Writing for Eng. Tech.	3
Total Credits Remaining		31

UNI Foundational Inquiry (UNIFI)		Cr.
WR - Written Communication		3
OC - Oral Communication		3
QR - Quantitative Reasoning		3
HD - Human Condition (Domestic)		3
HG - Human Condition (Global)		3
SR - Scientific Reasoning (with Lab)		4
HE - Human Expression		3
RE - Responsibility		3
UNIFI certificate or UNIFI electives		12
Total UNIFI Credits Remaining		28

Credits needed to earn UNI degree 69

5. How would I complete my degree?

Based on the remaining coursework, below is a semester-by-semester breakdown of how the student would complete any remaining requirements at UNI.

Fall 1	Cr.
CS 1160	3
ENGR 1000	3
PHIL 1560	3
TECH 2051	4
UNIFI course	3
Total	16

Spring 1	Cr.
MATH 1150	4
TECH 3160	3
ENGLISH 3772	3
UNIFI course	3
UNIFI course	3
Total	16

Summer 1	Cr.
UNIFI course	3
UNIFI course	3
Total	6

Fall 2	Cr.
STAT 1772	3
TECH 3129	3
TECH 4165	3
UNIFI course	4
UNIFI course	3
Total	16

Spring 2	Cr.
TECH 4104	3
TECH 4167	3
ENGR 4500	3
UNIFI course	3
UNIFI course	3
Total	15

Other Important Information

- This transfer guide is based off of the 2023-2024 academic catalogs at UNI & Des Moines Area Community College and includes future adjustments to the UNI curriculum.
- Courses listed in the Remaining UNI Plan of Study section are subject to change at any time and are based on a fall semester start.
- This transfer guide assumes the student is only transferring in coursework from this A.A.S. degree plan. Students **may transfer additional credits to UNI**, which will be evaluated on an individual basis.
- The UNI Foundational Inquiry (UNIFI) at UNI is the collection of general education courses required by the institution to fulfill the universities mission. For more information, visit unifi.uni.edu.